

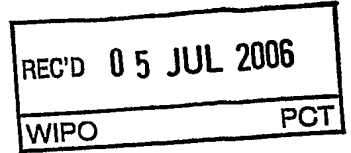
PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference J 1509 HG/JD-337-WO	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/US2005/004745	International filing date (<i>day/month/year</i>) 15.02.2005	Priority date (<i>day/month/year</i>) 23.03.2004	
International Patent Classification (IPC) or national classification and IPC INV. C23G1/18 C23G1/22 C23F11/167			
Applicant JOHNSON DIVERSEY, INC.			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 6 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> <i>sent to the applicant and to the International Bureau</i>) a total of sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).			
4. This report contains indications relating to the following items: <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application </div>			
Date of submission of the demand 23.01.2006		Date of completion of this report 04.07.2006	
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 </div> </div>		Authorized officer Handrea-Haller, M Telephone No. +31 70 340-4823	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2005/004745

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-20 as originally filed

Claims, Numbers

1-18 received on 03.03.2006 with letter of 01.03.2006

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/US2005/004745

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	1-18
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1 The following documents are referred to in this communication:

D1: US-A-4 752 411 (PETON NICOLE ET AL) 21 June 1988 (1988-06-21)

D2: US-A-4 578 208 (GEKE JUEERGEN ET AL) 25 March 1986 (1986-03-25)

2 NOVELTY

2.1 The present application satisfy the criterion set forth in Article 33(2) PCT because the subject-matter of independent claim 1 and the dependent claims 2-20 is new in respect to the prior art because none of the cited documents disclose a process for treating surfaces of aluminum, copper, brass, bronze, zinc and bismuth with a corrosion inhibiting composition comprising **ethoxylated** (3 EO to 6EO) **C₁₂-C₁₆ alkanols phosphate diesters** (i.e. Phospholan P65 and Maphos P54) (see examples G and H of the present application).

3 INVENTIVE STEP

3.1 The present application satisfy the criterion set forth in Article 33(3) PCT because the subject-matter of independent claim 1 involve an inventive step.

3.2 Document D2 is considered to represent the most relevant state of the art for independent claim 1 and discloses compositions and processes for cleaning and corrosion inhibiting of metal surfaces (e.g. aluminium, zinc nonferrous and lightweight metals) (cf. col. 2, lines 36-44) comprising contacting the metal surfaces with the alkaline

compositions at a temperature in the range of from about 35°C to about 70°C (cf. claim 14) for relatively short contact times, e.g. within the range of about 15 seconds to about 5 minutes (cf. col. 4, lines 60-62). Furthermore, D2 discloses alkaline compositions with a pH from about 7.5 to about 10.5 (cf. col. 4, lines 21-23, claim 7) comprising from 0.01 to 1 g/l of at least one phosphoric acid ester selected from: mono- and /or diester of phosphoric acid with C₁₀-C₂₀ alkanols, mono- and /or **diester of phosphoric acid with C₂-C₃ alkoxylated C₁₀-C₂₀ alkanols**, phosphoric acid ester of poly-C2-C3-alkylene glycol ether or water soluble salts of them (cf. claim 1); from 0.25 to 25 g/l of alkanolamine; from 0.001 to 1 g/l of at least one nonionic surfactant (cf. claims 1-4); chelating agents such as EDTA or nitrilotriacetate (cf. col. 4, lines 11-14, claim 5, 6); a non-ferrous metal inhibitor such as mercaptobenzo-thiazole or benzotriazole (cf. col. 4, lines 53-55, examples 5-8, 32-34).

The preferred compositions used in processes for cleaning and corrosion inhibiting of metal surfaces disclosed in D2 comprise **monoesters of phosphoric acid with ethoxylated** (e.g. 10 EO or 6 EO) **linear C₁₀-C₂₀ alkanols** and their sodium, potassium, ammonium or alkanolamine salts (cf. col. 2, lines 63-65, col. 6, lines 15-30, examples).

The present application can be considered as selection invention with regard to the document D2.

Since the application as filed clearly indicates special effects for **ethoxylated** (3 EO to 6EO) **C₁₂-C₁₆ alkanols phosphate diesters** (i.e. Phospholan P65 and Maphos P54) comprised in the corrosion inhibiting composition used in the process for cleaning and corrosion inhibiting of metal surfaces (see examples G and H of the present application) compared to the state of the art disclosed in D2, namely **monoesters** (see examples E and F of the present application), claim 1 is inventive.

- 3.3 Claims 2-20 are dependent on claim 1 as such also meet the requirements of the PCT with respect to inventive step.

4 INDUSTRIAL APPLICABILITY

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/US2005/004745

- 4.1 The invention shall be considered as susceptible of industrial application because it can be used in the corrosion inhibiting industry.